

### REMARKS/ARGUMENTS

Claims 17-39 and 42 -44 are in the application. Claims 40 and 41 have been cancelled. Claims 17 has been amended and new Claims 42 - 44 have been added.

#### Information Disclosure Statement

The applicants are aware of the comments by the USPTO concerning the references cited in the Information Disclosure Statement, but do not believe any further discussion of those references or submission is necessary.

#### Claim Rejections based on U.S. Patent No. 3,414,524.

The USPTO rejected several of the claims of the application under 35 U.S.C. Section 102 as being anticipated by U.S. Patent No. 3,414,524 (the "524 Patent"). Further, all claims were rejected under 35 U.S.C. Section 103 based on the '524 Patent in consideration of various other references. Based on the amendments to Claim 17 and the claim limitations contained in new Claims 42 - 44, the applicants respectfully assert that all claims are now in condition for allowance.

The applicants have discovered a new process for the activation of layer silicates which are utilized for decolorizing oils, fats and waxes. In this decolorizing process, as described

for example on page 3 of the application, various oils, waxes and fats are passed through activated layer silicates during one or more treatment stages during a refining process. The oils, waxes and fats are treated in this manner to remove various natural contaminants, such as pigments, phospholipids and other such materials. In prior art processes, the oils were treated by passing them through either untreated layer silicates, normally fuller's earth, or layer silicates that had been activated with a concentrated acid, preferably concentrated sulfuric acid.

In contrast in the process in the invention, these layer silicates are not activated by contact with conventional acids, but rather by contact with acid-producing microorganisms. The layer silicates are treated with these microorganisms "until a pH value of not more than about 3.4 is obtained." (Claim 17.)

This process for the treatment of the layer silicates that is disclosed and claimed in the application is distinctive from, and contrary to, the process taught in the '524 Patent. The '524 Patent teaches that "the pH of the liquor [is] being maintained between 5 and 8 (more preferably at 7) throughout growth and contacting." (Col. 2, lines 66 - 68.) This limitation on the permitted range of pH values is further discussed in Example 1, col. 6, lines 41 - 42, where it states "[t]he pH of the solution was kept between 5 and 8 throughout." Example V states that "[t]he pH of the liquor was about 7 throughout." Col. 7, lines 24 - 25

See also Claim 3. Thus, the '524 Patent teaches to a person skilled in the art that it is important that the pH value of the composition used to treat the material must be maintained within a narrow pH range around neutral, i.e. from about 5 to about 8, preferably about 7. Further, note that this pH of the composition in the '524 Patent is only of the "liquor" holding the bacteria, not the end product after treatment, as is claimed in the claims of the Application. In contrast the pH of the composition of the Application is of the end product i.e., the combination of the raw clay with the inoculated clay after treatment with the acid-producing microorganism. (Compare the pH levels in Comparison Example 1 with the pH level of the composition in Example 5 of the Application). Thus, it is likely that the pH level of the inoculated clay by itself is probably lower than the 2 - 4 level of the combined clay that is claimed in Claim 43, if it was measured.

In contrast to the teaching of the '524 Patent, the process of the applicants' invention requires use of an acidic material with a pH between about 2 and 4, preferably below 3.4. Accordingly, the process taught by the '524 Patent is entirely different from that claimed by the applicants.

U.S. Patent No. 2,813,821.

The USPTO has withdrawn the rejection under 35 U.S.C. Section 102 based on this reference because the material being treated with the microorganisms is different from the material disclosed in the patent. Therefore it is unnecessary to discuss this reference.

Rejections under 35 U.S.C. Section 103

All of the rejections under this statute are based on the teaching of the '524 Patent. As the teaching of the '524 Patent has been distinguished, the applicants assert that all rejections under 35 U.S.C. 103 must also be withdrawn. Regardless of the teachings of the supplemental references, there can be no teaching of the process of the invention, as now claimed because of the difference in processes between the '524 Patent and the claims of the application, as amended. Because the '524 Patent specifically asserts that the pH of the liquor used to treat the material being treated must be maintained at a level which is essentially neutral, i.e. from about 5 to about 8, and the pH of the layer silicate, as claimed, is required to be less than about 3.4, the claimed process is distinctive from the process taught by the '524 Patent. Any teaching in any of the Supplemental References showing a pH less than the range taught by the '524 Patent (5 to about 8) must be ignored as that pH range would be in direct conflict with the

teaching of the '524 Patent and, therefore, would not be combinable with the teaching of the '524 Patent under Section 103.

U.S. Patent No. 2,813,821.

The USPTO has already acknowledged by its withdrawal of the rejection based on this reference under Section 102 that this reference does not teach the claimed process. Further, the teaching of the '524 Patent cannot be combined with the teaching of the '821 Patent, as the pH range for the material that is mandated in the '821 Patent is outside of the range that is taught by the '524 Patent. The '821 Patent states that the pH range that is satisfactory for growth is between 4 and 9 (col. 4, lines 26-32). This range is outside of the range taught by the '524 Patent. Further, this range is outside of the range, as claimed in amended Claim 17. In addition, a person combining the teachings of the '524 Patent with the teachings of the '821 Patent would recognize that the appropriate pH range of the material treating the Product must be maintained at an essentially neutral pH and should never be outside of a range between 5 and 8. Accordingly, the combination of U.S. Patent No. 3,414,524 with U.S. Patent No. 2,813,821 does not disclose the teaching of the claims, as amended.

Kusnierova, et. al.

Kusnierova, et. al., fails to teach the treatment of layer silicates with bacteria at a pH value within the range of the amended and new claims of the application. Thus, because the '524 Patent also fails to teach the invention, as claimed, the combination of the '524 Patent and Kusnierova, et. al. cannot teach the claims of the Application.

U.S. Patent No. 1,752,721.

U.S. Patent No. 1,752,721 does not teach contacting a layer silicate with any bacterial material that is claimed in each claim of the application. Because the underlying reference, U.S. Patent No. 3,414,524 has been distinguished and because the supplemental reference, U.S. Patent No. 1,752,721 fails to teach the process of the claims, as amended, the combined references cannot teach the invention, as now claimed.

Groudev, et. al.

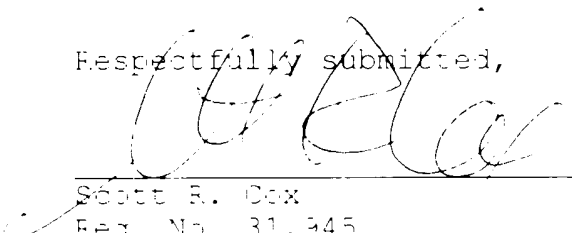
Groudev, et. al. fails to disclose any information concerning the pH value of the nutrient medium, and thus, does not teach to a person skilled in the art to maintain the pH level within the range as now claimed. Further, even if it could be argued that Groudev, et. al. teaches a pH level within the range as claimed, that range would be in direct conflict with the teachings of the primary

reference, U.S. Patent No. 3,414,524, and thus these two references cannot be combined. Accordingly, because the principal reference the '524 Patent has been removed, this combination of references cannot teach the claims of the application, as now amended.

#### CONCLUSION

The applicants believe that by the amendments to the Claims, it has removed all the references that have been cited against the patentability of the invention, and request that a Notice of Allowability be issued. If there are any further questions concerning this application, please contact applicants' counsel.

Respectfully submitted,

  
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